

1                   **INSPECTION DEVICE FOR RADAR ABSORBING MATERIALS**

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4                   **ABSTRACT**

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6       (040) The invention is a device for inspecting an assembly including a surface  
7       coating containing magnetic radar-absorbing materials on a conductive  
8       surface. In detail, the device includes a first system for transmitting an  
9       electromagnetic signal to the assembly, which includes a first waveguide made  
10      of a conductive material coupled in series to a second waveguide made of a  
11      dielectric material. A second system is provided for receiving the portion of the  
12      electromagnetic signal reflected from the assembly, which includes a third  
13      waveguide made of a conductive material coupled in series to a fourth  
14      waveguide made of a dielectric material. Thus the electromagnetic signal is  
15      transmitted from the first waveguide to the second waveguide on to the  
16      assembly and the portion of the electromagnetic signal reflected off the  
17      assembly is received by the fourth waveguide and transmitted to the third  
18      waveguide.

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